



Public private partnerships: Global experience and lessons learned

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Session 1

Public Private Partnerships: Global Experience and Lessons Learned

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Rural Electrification Workshop

February 23-25, 2005

Bangkok

Presentation Outline

- **Some key features of rural electrification**
- **Rural electrification and PPP**
- **PPP arrangements**
- **PPP grid-extension projects**
- **PPP off-grid projects**
- **PPP impacts**
- **Lessons learned**

Rural Electrification

Some Key Features

- **Options**

- Grid extension
- Off-grid
 - Mini-grids
 - Micro-grids
 - Isolated systems

- **Subsidies**



- **Market intervention on Projects**

- Commercially viable returns and risks once funded
 - Concessional financing on project development
- Commercially viable returns but above-market risks
 - Concessional financing on a contingent basis
- Below market returns
 - Concessional financing on a limited and targeted basis

Rural Electrification and PPP

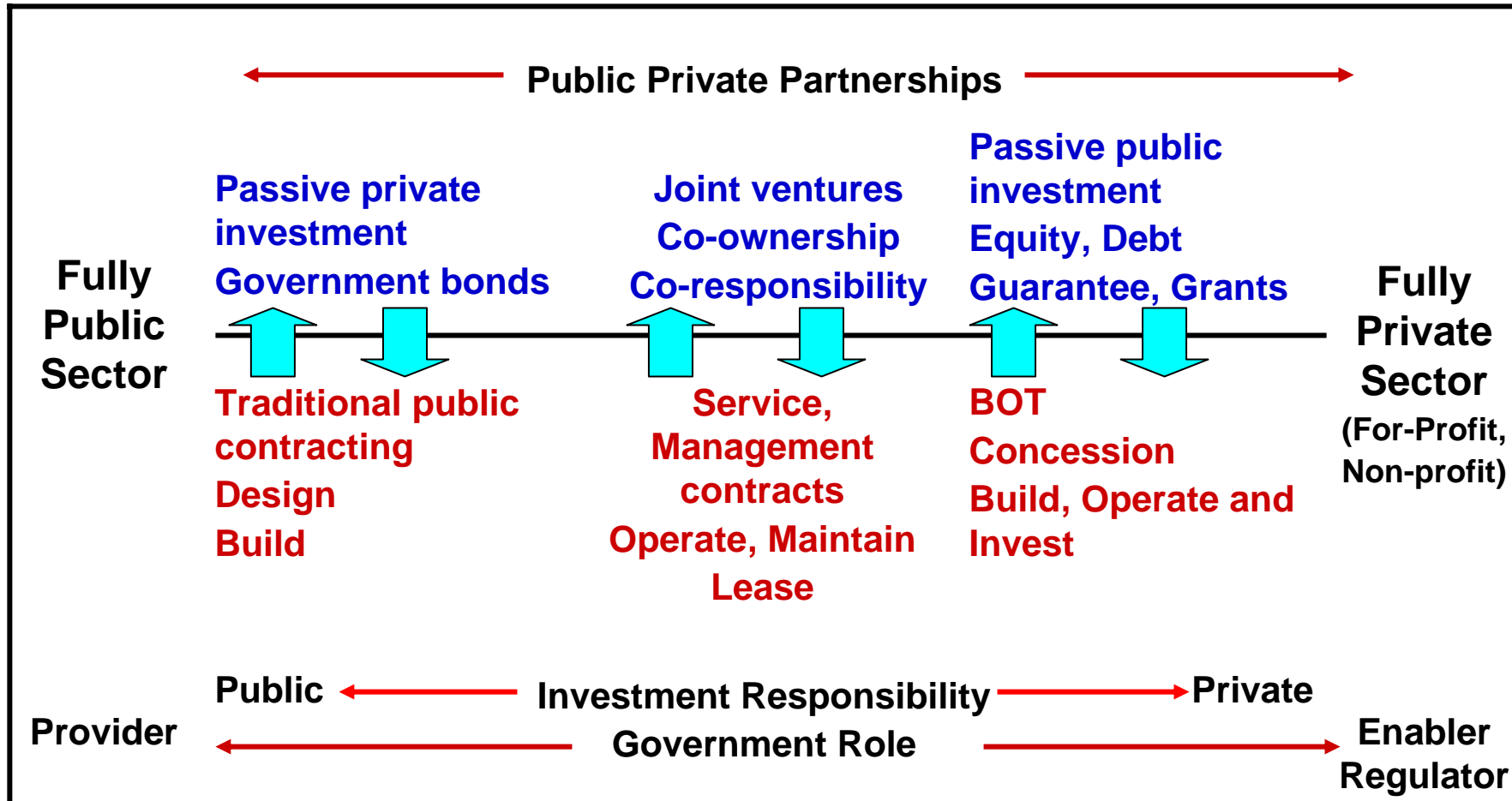
- **Key Issues**

- Lack of financial resources for grid extension
- High initial costs of off-grid technologies

- **PPP**

- Collaboration between a *public body* and a *private company* to address specific issue and/or implement a common venture
- Key dimensions
 - Organizational
 - Contractual
 - Investment

PPP Arrangements



PPP Grid-extension Project

CHILE - PER Project

- Rural electrification programme in a liberalized electricity market
 - Distribution: nonexclusive concession
- **Grid extension** rural electrification project
- **Subsidy** through *competitive bidding*
 - Local communities in partnership with private operators develop and submit a proposal specifying the amount of subsidy and company contribution
- **Funding:** National Fund for Regional Development (*subsidy*), distribution company (*investment costs*), customers (*connection costs*)
- **Implementation:** local distribution company operates, manage and maintain
- **Results:** increased rural electrification by 50% (1994-1999)

PPP Off-grid Projects

Mini/micro-grids

MOZAMBIQUE – Inhambane Province

- New Electricity Law permits private sector participation
- **Mini-grid** (generation, distribution) rural electrification project
- **Concession** through competitive bidding (Mozabican and South African consortium)
- **Technology** – natural gas generation
- **Funding**: concessionaire, government (25%), energy fund (*subsidy for HH connections*)
- **Expected results**: 3000 new connections

NEPAL

- Electricity Act allows private/ community participation

Tetrathum Village

- **Performance improvement** (financial and technical) of small hydro project (100 kW)
- **Lease agreement** – private company SBB and NEA
- **Results**: improved performance, 800 customers

Gandruk Village

- **Local community** initiated and owned micro-hydro project (50 kW)
- **Funding**: Agricultural Bank (*loan*), government (*grant*), community (*cash and in-kind contribution*)
- **Results**: 278 customers, paid-off the loan, operating profit

PPP Off-grid Projects

Isolated systems

ARGENTINA (PERMER project)

- Rural electrification programme in a liberalized electricity market
- Electricity service through **Solar Home Systems** for HH and public sector
- **Concession (exclusive)** through *competitive bidding*
- **Funding:** WB, GEF, Electricity Investment Development Fund (*output-based subsidy*), concessionaires, customers (*fee-for-service*)
- **Expected results:** 70,000 HH and 1,100 schools and clinics

SRI LANKA, Uva Province

- Remote Province and considered to be economically unfeasible for grid extension
- **Provincial council**
 - Diverted grid extension budget for SHS subsidy
 - Project monitoring
- **Micro Finance Institutions and Private Banks**
 - Provided loans to HH
- **PV Dealers**
 - Marketing and capacity building
- **Results:** more than 6000 systems are installed

PPP Impacts

	Livelihood benefits	Sustainability
ETHIOPIA		
Private diesel off-grid, Bonna	X	X
Municipality owned diesel off-grid, Bonosha	X	X
Community owned off-grid micro-hydro, Yaye	XXX	XX
NEPAL		
Micro hydro scheme, Ghandruk	XXX	XXX
Small hydropower, Tetathum	XXX	XXX
SRI LANKA		
Micro-hydro Hettikanda and Athulauda Villages	XXX	XXX
Solar PV Home Systems, Uva Province	XX	XXX
UGANDA		
Mini-grid from Diesel Genset, Magale Village	XX	X
Micro-hydro system, Kisiizi	XXX	XXX
KEY: X – weak, XX – medium, XXX – strong <i>Source: Mazzoni and Isaac, 2005</i>		

Lessons Learned

- **Stakeholder's participation, particularly local communities**
 - key to successful and sustainable PPP
- **Institutional aspects**
 - Clear national policy, legal, regulatory frameworks result in both national and local level initiated partnerships
 - Absence of 'rules' from the national level results in local level initiated partnerships
 - Local institutions must have administrative power and capacity to engage with the private sector
- **Financing**
 - Mechanisms to make rural electrification projects viable (or financing available) provide private sector incentives to enter into partnerships
 - grants, output-based subsidies